

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

CONDITIONAL MAJOR FINAL NO. F-02-015
MODERN WELDING CO. OF KENTUCKY, INC. – MADISONVILLE
MADISONVILLE, KENTUCKY
March 8, 2004
BABAK FAKHARPOUR, PERMIT REVIEWER
AFS I.D.# 21-107-00138
Application Log # 53409

EXECUTIVE SUMMARY

Modern Welding Co. of Kentucky, Inc. has applied to the Kentucky Division for Air Quality for a Conditional Major permit for the operation of a steel fabrication facility in Madisonville, Kentucky. The source has requested to limit their potential emissions of criteria pollutants and HAP to avoid the major source status.

A preliminary determination was made to approve the permit and a public notice was placed in The Messenger on March 5, 2003. The comment period expired on April 5, 2003, and no comments were received from the public. No comments were received from EPA.

In conclusion, a thorough analysis has been made of all relevant information available that pertains to this application. The Division has concluded that the source will comply with all applicable air quality regulations and requirements. Compliance with the terms of the permit will ensure compliance with all air quality requirements. Therefore, it is The Division's final determination that a Conditional Major permit should be issued as conditioned.

SOURCE DESCRIPTION:

Modern Welding Co. of Kentucky Inc., Madisonville, performs welding, grit blasting, and painting of miscellaneous metal parts. The steel is formed, welded, shot blasted, and coated by a painting process. The source has submitted information on these facilities and has requested to become a conditional major.

COMMENTS:

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations.

401 KAR 52:030, Federally-enforceable permits for non-major sources.

The processes are mostly batch operations. Welding operations are comprised of various welding machines

located in the facility. All Lincoln welding units were installed after 1975. Therefore, 401 KAR 59:010, New process operations, applies to the welding operations. To comply with 401 KAR 59:010, particulate emissions from the welding operations shall be less than 2.34 lb/hr. In addition, visible emissions from the facility shall not be greater than 20% opacity. Welding material has hazardous air pollutants (Manganese, Chromium and Nickel).

Abrasive blasting is used for prepping small metal pieces for coating. The grit blasting machine was installed in 1979 (unit was manufactured in 1968). Therefore, 401 KAR 59:010 apply to this process. Cast steel shot and Black Beauty™ are used, which has been shown to release hazardous air pollutants (Manganese). The blasting operation control equipment is a bag house with efficiency of 99.8%.

Emissions from the surface coating operation are subject to 401 KAR 59:010, New process operations. The particulate matter emission from this process shall not exceed 2.34 lb/hr or 20% opacity. The surface coating operation control equipment is a spray paint filtering system with efficiency of 99.9%. To preclude applicability of 401 KAR 52:020 and 401 KAR 59:225, New miscellaneous metal parts and products surface coating operations, Modern Welding requests emission limitation to restrict the plantwide VOC emission rates to be less than 90 tons per year. Also to preclude Title V applicability, the emissions of combined hazardous air pollutants shall not exceed 22.5 tons per year, the emissions of an individual hazardous air pollutants shall not exceed 9.0 tons per year, and the plantwide particulate emission rates are limited to less than 90 tons per year. Therefore, 401 KAR 52:030, Federally-enforceable permits for non-major sources, is applicable for the source.

EMISSION AND OPERATING CAPS DESCRIPTION:

1. Volatile organic compound (VOC) emissions shall not exceed 90 tons per year based on a 12 month rolling total for the entire source to preclude a major source Title V review.
2. Hazardous air pollutants (HAPs) emissions shall not exceed 9 tons per year individually and 22.5 tons per year combined based on a rolling 12 month total for the entire source to preclude a major source Title V review.
3. Particulate matter (TSP) emissions shall not exceed 90 tons per year based on a 12 month rolling total for the entire source to preclude a major source Title V review.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.